

SEQUENCE LISTING

<110> Klein, Robert D.
Brennan, Thomas J.

<120> METHODS OF CREATING CONSTRUCTS USEFUL FOR INTRODUCING
SEQUENCES INTO EMBRYONIC STEM CELLS

<130> 376472000200

<140> Unassigned

<141> 1998-11-17

<150> 60/084,949

<151> 1998-05-11

<160> 44

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 4768

<212> DNA

<213> Plasmid vector

<400> 1

gttaactacg	tcaggtggca	cttttcgggg	aaatgtgcgc	ggaaccoccta	tttgtttatt	60
tttctaaata	cattcaaata	tgtatccgct	catgagacaa	taaccctgat	aaatgcttca	120
ataatattga	aaaaggaaga	gtatgagtat	tcaacatttc	cgtgtcgccc	ttattccctt	180
ttttgcggca	ttttgccttc	ctgtttttgc	tcaccagaa	acgctggtga	aagtaaaaga	240
tgctgaagat	cagttgggtg	cacgagtggg	ttacatcgaa	ctggatctca	acagcggtaa	300
gatccttgag	agttttcgcc	ccgaagaacg	ttctccaatg	atgagcactt	ttaaagttct	360
gctatgtggc	gcggtattat	cccgtgttga	cgccgggcaa	gagcaactcg	gtcgcgcgat	420
acactattct	cagaatgact	tggttgagta	ctcaccagtc	acagaaaagc	atcttacgga	480
tggcatgaca	gtaagagaat	tatgcagtgc	tgccataacc	atgagtgata	acactgcggc	540
caacttactt	ctgacaacga	tcggaggacc	gaaggagcta	accgcttttt	tgcacaacat	600
gggggatcat	gtaactcgcc	ttgatcgttg	ggaaccggag	ctgaatgaag	ccataccaaa	660
cgacgagcgt	gacaccacga	tgccctgtagc	aatggcaaca	acgttgcgca	aactattaac	720
tggcgaacta	cttactctag	cttcccggca	acaattaata	gactggatgg	aggcggataa	780
agttgcagga	ccacttctgc	gctcggccct	tccggctggc	tggtttattg	ctgataaaatc	840
tggagccggt	gagcgtgggt	ctcgcggtat	cattgcagca	ctggggccag	atggtaagcc	900
ctcccgtatc	gtagtattct	acacgacggg	gagtcaggca	actatggatg	aacgaaatag	960
acagatcgct	gagatagggt	cctcactgat	taagcattgg	taactgtcag	accaagttta	1020
ctcatatata	cttttagattg	atttaccccg	gttgataatc	agaaaagccc	caaaaacagg	1080
aagattgtat	aagcaaatat	ttaaattgta	aacgttaata	ttttgttaaa	attcgcgtta	1140
aatttttgtt	aaatcagctc	attttttaac	caataggccg	aaatcggcaa	aatcccttat	1200
aaatcaaaaag	aatagcccga	gatagggttg	agtgttggtc	cagtttgga	caagagtcca	1260
ctattaaaga	acgtggactc	caacgtcaaa	gggcgaaaaa	ccgtctatca	gggcgatggc	1320
ccactacgtg	aaccatcacc	caaatcaagt	tttttgggtg	cgaggtgccg	taaagcacta	1380
aatcggaacc	ctaaagggag	ccccgattt	agagcttgac	ggggaaagcg	aacgtggcga	1440
gaaaggaagg	gaagaaagcg	aaaggagcgg	gcgctagggc	gctggcaagt	gtagcgggtca	1500
cgctgcgcgt	aaccaccaca	cccgcgcgcg	ttaatgcgcc	gctacagggc	gcgtaaaagg	1560
atctaggtga	agatcctttt	tgataatctc	atgacaaaaa	tcccttaacg	tgagttttcg	1620
ttccactgag	cgtcagaccc	cgtagaaaaa	atcaaaaggt	cttcttgaga	tccttttttt	1680
ctgcgcgtaa	tctgtgctt	gcaaaacaaa	aaaccaccgc	taccagcggg	ggtttgtttg	1740
ccggatcaag	agctaccaac	tctttttccg	aaggtaactg	gcttcagcag	agcgcagata	1800
ccaaatactg	ttcttctagt	gtagccgtag	ttaggccacc	acttcaagaa	ctctgtagca	1860

ccgectacat	acctcgtctt	gctaatacctg	ttaccagtg	ctgctgccag	tggcgataag	1920
tcgtgtctta	cgggttgga	ctcaagacga	tagttaccgg	ataaggcgca	gcggtcgggc	1980
tgaacggggg	gttcgtgcac	acagcccagc	ttggagcgaa	cgacctacac	cgaactgaga	2040
tacctacagc	gtgagctatg	agaaagcgcc	acgcttcccc	aaggggagaaa	ggcggacagg	2100
tatccggtaa	gcggcagggt	cggaacagga	gagcgcacga	gggagcttcc	agggggaaac	2160
gcctggtatc	tttatagtc	tgctgggttt	cgccaactct	gacttgagcg	tcgatttttg	2220
tgatgctcgt	cagggggg	gagcctatgg	aaaaacgcca	gcaacgcggc	ctttttacgg	2280
ttcctggcct	tttgetggcc	ttttgctcac	atgtaatgtg	agtttagctca	ctcattaggg	2340
accccaggct	ttacacttta	tgcttccggc	tcgtatgttg	tgtggaattg	tgagcggata	2400
acaattttcac	acaggaaaca	gctatgacca	tgattacgcc	aagctacgta	atacgactca	2460
ctaggcggcc	gcgtttaaac	aatgtgctcc	tctttggctt	gcttccgcgg	gccaagccag	2520
acaagaacca	gttgacgtca	agcttcccg	gacgcgtgct	agcggcgcg	cgaattcctg	2580
caggattcga	gggcccctgc	aggtcaattc	taccgggtag	gggagcgct	tttcccaagg	2640
cagtctggag	catgcgcttt	agcagcccg	ctggcacttg	gcgctacaca	agtggcctct	2700
ggcctcgcac	acattccaca	tccaccggta	gcgccaaacc	gctccgttct	ttggtggccc	2760
cttcgogcca	ccttctactc	ctcccctagt	caggaaagttc	ccccccgccc	cgcagctcgc	2820
gtcgtgcagg	acgtgacaaa	tggaagtgc	acgtctcact	agtctcgtgc	agatggacag	2880
caccgtgag	caatggaagc	gggtaggcct	ttggggcagc	ggccaatagc	agctttgctc	2940
cttcgctttc	tgggctcaga	ggctgggaa	gggtgggtcc	gggggcgggc	tcaggggcgg	3000
gctcaggggc	ggggcgggcg	cgaaggtcct	cccaggcccc	ggcattctcg	cacgcttcaa	3060
aagcgcacgt	ctgcgcgct	gttctcctct	tcctcatctc	cgggcctttc	gacctgcagc	3120
caatatggga	tcggccattg	aacaagatgg	attgcacgca	ggttctccgg	ccgcttgggt	3180
ggagaggcta	ttcggtatg	actgggcaca	acagacaatc	ggctgctctg	atgcgcctg	3240
gttcgggtg	tcagcgcagg	ggcgcgcgt	tctttttgtc	aagaccgacc	tgtccggtgc	3300
cctgaatgaa	ctgcaggacg	aggcagcgcg	gctatcgtgg	ctggccacga	cgggcgttcc	3360
ttgcgcagct	gtgctcgacg	ttgtcactga	agcgggaagg	gactggctgc	tattgggcga	3420
agtgcggggg	caggatctcc	tgtcatctca	ccttgctcct	gccgagaaag	tatccatcat	3480
ggctgatgca	atgcggcggc	tgcatagcgt	tgatccggct	acctgcccat	tcgaccacca	3540
agcgaacat	cgcctagagc	gagcacgtac	tcggatggaa	gccggtcttg	tcgatcagga	3600
tgatctggac	gaagagcatc	aggggctcgc	gccagccgaa	ctgttcgcca	ggctcaaggc	3660
gcgcatgccc	gacggcgatg	atctcgtcgt	gacctatggc	gatgcctgct	tgccgaatat	3720
catggtggaa	aatggcgcgt	tttctggatt	catcgactgt	ggccggctgg	gtgtggcgga	3780
ccgctatcag	gacatagcgt	tggtaccgg	tgatattgct	gaagagcttg	gcggcgaaatg	3840
ggctgaccgc	ttcctcgtgc	tttacgggtat	cgcgcgtccc	gattcgcagc	gcatcgctt	3900
ctatcgctt	cttgacgagt	tcttctgagg	ggatcgatcc	gtcctgtaag	tctgcagaaa	3960
ttgatgatct	attaacaat	aaagatgtcc	actaaaatgg	aagtttttcc	tgtcatactt	4020
tgtaagaag	ggtgagaaca	gagtacctac	attttgaatg	gaaggattgg	agctacgggg	4080
gtgggggtgg	ggtgggatta	gataaatgcc	tgctctttac	tgaaggctct	ttactattgc	4140
tttatgataa	tgtttcatag	ttggatatca	taattttaaac	aagcaaaaacc	aaattaaggg	4200
ccagctcatt	cctccactc	atgatctata	gatctataga	tctctcgtgg	gatcattgtt	4260
tttctcttga	ttcccacttt	gtggttctaa	gtactgtggt	ttccaaatgt	gtcagtttca	4320
tagcctgaag	aacgagatca	gcagcctctg	ttccacatac	acttcattct	cagtattgtt	4380
ttgccaaagt	ctaattccat	cagaagctga	ctctagatct	ggatccggcc	agctaggcgg	4440
tcgacctcga	gtgatcaggt	accaaggtcc	tcgctctgtg	tccgttgagc	tcgacgacac	4500
aggacacgca	aattaattaa	ggccggcccg	taccctctag	tcaaggcctt	aagtgagtcg	4560
tattacggac	tggccgtcgt	tttacaacgt	cgtgactggg	aaaaccctgg	cgttacccaa	4620
cttaatcgcc	ttgcagcaca	tccccctttc	gccagctggc	gtaatagcga	agaggcccg	4680
accgatcgcc	cttcccaaca	gttgcgcgagc	ctgaatggcg	aatggcgctt	cgttggttaa	4740
taaagcccg	ttcggcgggc	tttttttt				4768

<210> 2

<211> 6355

<212> DNA

<213> Plasmid vector

<400> 2

gtttaatagt aatcaattac ggggtcatta gttcatagcc catatatgga gttccgcgtt

60

acataactta	cggtaaattg	cccgcctggc	tgaccgcca	acgacccccg	cccattgacg	120
tcaataatga	cgtatgttcc	catagtaacg	ccaataggga	ctttccattg	acgtcaatgg	180
gtggagtatt	tacggtaaac	tgcccacttg	gcagtagatc	aagtgtatca	tatgccaaat	240
acgcccccta	ttgacgtcaa	tgacggtaaa	tggccccgct	ggcattatgc	ccagtacatg	300
accttatggg	actttcctac	ttggcagtag	atctacgtat	tagtcatcgc	tattaccatg	360
gtgatgcggg	tttggcagta	catcaatggg	cgtggatagc	ggtttgactc	acggggattt	420
ccaagtctcc	acccatttga	cgtcaatggg	agtttgtttt	ggcaccacaa	tcaacgggac	480
tttccaaaat	gtcgtaaaca	ctccgcccc	ttgacgcaaa	tgggcggtag	gcgtgtacgg	540
tgggaggtct	atataagcag	agctggttta	gtgaaccgtc	agatccgcta	gcgctaccgg	600
tcgccaccat	ggtgagcaag	ggcgaggagc	tgttcacccg	ggtggtgccc	atcctggtcg	660
agctggacgg	cgacgtaaac	ggccacaagt	tcagcgtgtc	cggcgagggc	gagggcgatg	720
ccacctacgg	caagctgacc	ctgaagtcca	tctgcaccac	cggaagctg	cccgtgccct	780
ggccaccct	cgtgaccacc	ctgacctacg	gcgtgcagtg	cttcagccgc	taccccgacc	840
acatgaagca	gcacgacttc	ttcaagtccg	ccatgcccga	aggctacgtc	caggagcgca	900
ccatcttctt	caaggacgac	ggcaactaca	agaccgcgc	cgagggtgaag	ttcgaggggcg	960
acaccctggg	gaaccgcctc	gagctgaagg	gcctcgactt	caaggaggac	ggcaacatcc	1020
tggggcaca	gctggagtac	aactacaaca	gccacaacgt	ctatatcatg	gccgacaagc	1080
agaagaacgg	catcaagggt	aacttcaaga	tcgccacaaa	catcgaggac	ggcagcgtgc	1140
agctcgccga	ccactaccag	cagaaccccc	ccatcgccga	cggccccgtg	ctgctgcccc	1200
acaaccacta	cctgagcacc	cagtcggccc	tgagcaaga	ccccaacgag	aagcgcgctc	1260
acatggtcct	gctggagtcc	gtgaccgccc	ccgggatcac	tctcgccatg	gacgagctgt	1320
acaagtccgg	actcagatcc	accggatcta	gataactgat	cataatcagc	cataccacat	1380
ttgtagaggt	tttacttgct	ttaaaaaacc	tcccacacct	ccccctgaac	ctgaaacata	1440
aaatgaatgc	aattgttggt	gttaacttgt	ttattgcagc	ttataatggt	tacaaataaa	1500
gcaatagcat	cacaaatttc	acaaataaag	catttttttc	actgcattct	agttgtgggt	1560
tgtccaaaact	catcaatgta	tcttaacgcg	aactacgtca	ggtggcactt	ttcggggaaa	1620
tgtgcgcgga	acccctatct	gtttattttt	ctaaatacat	tcaaataatg	atccgctcat	1680
gagacaataa	ccctgataaa	tgcttcaata	atattgaaaa	aggaagagta	tgagtattca	1740
acatttcctg	gtcgccctta	ttcccttttt	tgcggcattt	tgccctcctg	tttttgetca	1800
cccagaaacg	ctggtgaaag	taaaagatgc	tgaagatcag	ttgggtgcac	gagtgggtta	1860
catcgaaact	gatctcaaca	gcggtgaagt	ccttgagagt	tttcgccccg	aagaacgctt	1920
tccaatgatg	agcactttta	aagttctgct	atgtggcgcg	gtattatccc	gtgttgacgc	1980
cgggcaagag	caactcggtc	gccgcataca	ctattctcag	aatgacttgg	ttgagtactc	2040
accagtcaca	gaaaagcatc	ttacggatgg	catgacagta	agagaattat	gcagtgtctg	2100
cataaccatg	agtataaca	ctgcggccaa	cttacttctg	acaacgatcg	gaggaccgaa	2160
ggagctaacc	gcttttttgc	acaacatggg	ggatcatgta	actcgccttg	atcgttggga	2220
accggagctg	aatgaagcca	taccaaacga	cgagcgtgac	accacgatgc	ctgtagcaat	2280
ggcaacaacg	ttgcgcaaac	tattaactgg	cgaactactt	actctagctt	cccggaacaa	2340
attaatagac	tggatggagg	cggataaagt	tgcaggacca	cttctgcgct	cggcccttcc	2400
ggctggctgg	tttattgctg	ataaatctgg	agccggtgag	cgtgggtctc	gcggtatcat	2460
tgagcactg	gggcccagat	gtaagccctc	cgtatcgtga	gttatctaca	cgacggggag	2520
tcaggcaact	atggatgaac	gaaatagaca	gatcgtgag	ataggtgcct	cactgattaa	2580
gcattggtaa	ctgtcagacc	aagtttactc	atatatactt	tagattgatt	taccccggtt	2640
gataatcaga	aaagccccaa	aaacaggaag	attgtataag	caaataattta	aattgtaaac	2700
gttaatatct	tggttaaaat	cgcgttaaat	ttttgttaaa	tcagctcatt	ttttaaccaa	2760
taggccgaaa	tcggcaaaat	cccttataaa	tcaaagaagt	agcccagagt	aggggttagt	2820
gttggtccag	tttggaacaa	gagtcacta	ttaaagaacg	tggactcaa	cgtcaaaggg	2880
cgaaaaacgg	tctatcaggg	cgatggccca	ctacgtgaac	catcacccaa	atcaagtttt	2940
ttggggtcga	ggtgccgtaa	agcactaaat	cggaaacctt	aagggagccc	ccgatttaga	3000
gcttgacggg	gaaagcgaac	gtggcgagaa	aggaagggaa	gaaagcgaac	ggagcggggc	3060
ctaggcgct	ggcaagtgt	gcggtcacgc	tgcgcgtaac	caccacaccc	gccgcgctta	3120
atgcgcgctg	acagggcgcg	taaaaggatc	taggtgaaga	tcctttttga	taatctcatg	3180
acccaaatcc	cttaacgtga	gttttcgttc	cactgagcgt	cagaccccg	agaaagatc	3240
aaaggtctct	cttgagatcc	ttttttctg	cgggtaatct	gtgcttgca	aacaaaaaaa	3300
ccaccgctac	cagcgggtgg	ttgtttgcgg	gatcaagagc	taccaactct	ttttccgaag	3360
gtaactggct	tcagcagagc	gcagatacca	aatactgttc	ttctagtgt	gcgtagttaa	3420
ggccaccact	tcaagaactc	tgtagcaccg	cctacatacc	tcgctctgct	aatcctgtta	3480

ccagtggctg	ctgccagtg	cgataagtcg	tgtcttaccg	ggttggactc	aagacgatatg	3540
ttaccggata	aggcgagcg	gtcgggctga	acgggggggt	cgtgcacaca	gccagcttg	3600
gagcgaacga	cctacaccga	actgagatac	ctacagcggtg	agctatgaga	aagcgccacg	3660
cttcccgaag	ggagaaaggc	ggacaggtat	ccggtaaagc	gcagggtcgg	aacaggagag	3720
cgacagagg	agcttccagg	gggaaacgcc	tggatatctt	atagtcctgt	cggttttcgc	3780
cacctctgac	ttgagcgctg	atctttgtga	tgtctgtcag	ggggcgagg	cctatggaaa	3840
aacgccagca	acgcggcctt	tttacggctt	ctggcctttt	gctggccttt	tgctcacatg	3900
taatgtgagt	tagctcactc	attaggcacc	ccaggcttta	cactttatgc	ttccggctcg	3960
tatgttgtgt	ggaattgtga	gcggataaca	atttcacaca	ggaaacagct	atgacatga	4020
ttacgccaa	ctacgttaata	cgactcacta	ggcgccgcg	tttaaacaat	gtgctcctct	4080
ttggcttgct	tcggcgggcc	aagccagaca	agaaccagtt	gacgtcaagc	ttcccgggac	4140
gcgtgctagc	ggcgcgccga	attcctgcag	gattcgagg	ccctgcagg	tcaattctac	4200
cgggtagggg	aggcgctttt	cccaaggcag	tctggagcat	gcgctttagc	agccccgctg	4260
gcacttggcg	ctacacaagt	ggcctctggc	ctcgacacac	ttccacatcc	accgtagcgc	4320
ccaacoggct	ccgttctttg	gtggccccct	cgcgcacact	tctactcctc	ccctagtcag	4380
gaagtccccc	cccgccccgc	agctcgcgct	gtgcaggacg	tgacaaatgg	aagtagcacg	4440
tctcactagt	ctcgtgcaga	tggacagcac	cgctgagcaa	tggaaagcgg	taggcctttg	4500
gggcagcggc	caatagcagc	tttgctcctt	cgttttctgg	gctcagaggc	tgggaagggg	4560
tgggtccggg	ggcgggctca	ggggcggggt	cagggcgggg	gcggcgcgca	aggtcctccc	4620
gaggcccggc	attctcgcac	gcttcaaaag	cgcagctctg	ccgcgctgtt	ctcctcttcc	4680
tcatctccgg	gcctttcgac	ctgcagccaa	tatgggatcg	gccattgaac	aagatggatt	4740
gcacgcaggt	tctccggccg	cttgggtgga	gaggtatttc	ggctatgact	gggcacaaca	4800
gacaatcggc	tgctctgatg	ccgcctgtgt	ccgctgttca	gcgcaggggc	gcccgggttct	4860
ttttgtcaag	accgacctgt	ccggtgccct	gaatgaactg	caggacgagg	cagcgcggtc	4920
atcgtggctg	gccacgacgc	gcgttccttg	cgcagctgtg	ctcgacgttg	tactgaagc	4980
gggaagggac	tggctgctat	tgggcgaagt	gccggggcag	gatctcctgt	catctcacct	5040
tgctcctgcc	gagaaaagtat	ccatcatggc	tgatgcaatg	cggcggtctg	atacgcttga	5100
tcgggctacc	tgcccattcg	accaaccaagc	gaaacatcgc	atcgagcgag	cacgtactcg	5160
gatggaagcc	ggtcttgtcg	atcaggatga	tctggacgaa	gagcatcagg	ggctcgcgcc	5220
agccgaactg	ttcgccaggc	tcaaggcgcg	catgcccgac	ggcgatgac	tcgtcgtgac	5280
ccatggcgat	gcctgcttgc	cgaatatcat	ggtggaaaat	ggccgctttt	ctggattcat	5340
cgactgtggc	cggctgggtg	tggcggaacc	ctatcaggac	atagcgttgg	ctaccggtga	5400
tattgtcgaa	gagcttggcg	gcgaatgggc	tgaccgcttc	ctcgtgcttt	acggtatcgc	5460
cgctccgat	tcgcagcgca	tgccttctta	tcgccttctt	gacgagttct	tctgagggga	5520
tcgatccgtc	ctgtaagtct	gcagaaattg	atgatctatt	aaacaataaa	gatgtccact	5580
aaaaatggaag	tttttcctgt	catactttgt	taagaagggt	gagaacagag	tacctacatt	5640
ttgaatggaa	ggattggagc	tacgggggtg	ggggtggggg	gggattagat	aaatgcctgc	5700
tctttactga	aggctcttta	ctattgcttt	atgataatgt	ttcatagttg	gatatcataa	5760
tttaaacaag	caaaacccaa	ttaagggccca	gctcatctct	cccactcatg	atctatagat	5820
ctatagatct	ctcgtgggat	cattgttttt	ctcttgattc	ccactttgtg	gttctaagta	5880
ctgtggtttc	caaatgtgtc	agtttcatag	cctgaagaac	gagatcagca	gcctctgttc	5940
cacatacact	tcattctcag	tattgttttg	ccaagtctta	attccatcag	aagctgactc	6000
tagatctgga	tcgggccagc	taggcggtcg	acctcgagtg	atcaggtaac	aaggtcctcg	6060
ctctgtgtcc	gttgagctcg	acgacacagg	acacgcaaat	taattaaggc	cggcccgctac	6120
cctctagtca	aggccttaag	tgagtcgtat	tacggactgg	ccgtcgtttt	acaacgtcgt	6180
gactgggaaa	accctggcgt	tacccaactt	aatcgccctg	cagcacatcc	ccctttcgcc	6240
agctggcgta	atagcgaaga	ggcccgccac	gatcgccctt	cccaacagtt	gcgcagcctg	6300
aatggcgaat	ggcgcttcgc	ttggtaataa	agcccgcttc	ggcgggcttt	ttttt	6355

<210> 3

<211> 28

<212> DNA

<213> Plasmid vector

<400> 3

aatgtgctcc tctttggctt gcttccgc

28

<210> 4	
<211> 26	
<212> DNA	
<213> Plasmid vector	
<400> 4	
ggaagcaagc caaagaggag cacatt	26
<210> 5	
<211> 27	
<212> DNA	
<213> Plasmid vector	
<400> 5	
aactggttct tgtctggctt ggcccgc	27
<210> 6	
<211> 25	
<212> DNA	
<213> Plasmid vector	
<400> 6	
gggccaaagcc agacaagaac cagtt	25
<210> 7	
<211> 28	
<212> DNA	
<213> Plasmid vector	
<400> 7	
aaggtcctcg ctctgtgtcc gttgagct	28
<210> 8	
<211> 24	
<212> DNA	
<213> Plasmid vector	
<400> 8	
caacggacac agagcgagga cctt	24
<210> 9	
<211> 27	
<212> DNA	
<213> Plasmid vector	
<400> 9	
aatttgcggtg tctgtgtcg tcgagct	27
<210> 10	
<211> 23	
<212> DNA	
<213> Plasmid vector	
<400> 10	
cgacgacaca ggacacgcaa att	23
<210> 11	

<211> 26
 <212> DNA
 <213> Plasmid vector

 <400> 11
 tgtgctcttc tttggcttgc ttccaa 26

 <210> 12
 <211> 26
 <212> DNA
 <213> Plasmid vector

 <400> 12
 ttggaagcaa gccaaagagg agcaca 26

 <210> 13
 <211> 25
 <212> DNA
 <213> Plasmid vector

 <400> 13
 ctggtttcttg tctggcttgg cccaa 25

 <210> 14
 <211> 25
 <212> DNA
 <213> Plasmid vector

 <400> 14
 ttgggccaaag ccagacaaga accag 25

 <210> 15
 <211> 24
 <212> DNA
 <213> Plasmid vector

 <400> 15
 ggtcctcgct ctgtgtccgt tgaa 24

 <210> 16
 <211> 24
 <212> DNA
 <213> Plasmid vector

 <400> 16
 ttcaacggac acagagcgag gacc 24

 <210> 17
 <211> 23
 <212> DNA
 <213> Plasmid vector

 <400> 17
 ttgctgtgc ctgtgtcgc gaa 23

 <210> 18
 <211> 23

<212> DNA
 <213> Plasmid vector

 <400> 18
 ttcgacgaca caggacacgc aaa 23

 <210> 19
 <211> 25
 <212> DNA
 <213> Plasmid vector

 <400> 19
 atgaccgctc aggaaacctg ttgca 25

 <210> 20
 <211> 25
 <212> DNA
 <213> Plasmid vector

 <400> 20
 ataggcatag taggccagct tgagg 25

 <210> 21
 <211> 51
 <212> DNA
 <213> Plasmid vector

 <400> 21
 tgtgtctctc tttggcttgc ttccaattaa ccctcactaa aggggaacgaa t 51

 <210> 22
 <211> 50
 <212> DNA
 <213> Plasmid vector

 <400> 22
 ctggttcttg tctggcttgg cccaatgcaa cagggttcct gagcgggtcat 50

 <210> 23
 <211> 49
 <212> DNA
 <213> Plasmid vector

 <400> 23
 ggtcctcgct ctgtgtccgt tgaacctcaa gctggcctac tatgcctat 49

 <210> 24
 <211> 49
 <212> DNA
 <213> Plasmid vector

 <400> 24
 tttgcgtgtc ctgtgtcgtc gaacgactaa tacgactcac tatagggcg 49

 <210> 25
 <211> 25
 <212> DNA

<213> Plasmid vector
 <400> 25
 gccaatggac tcttagtttt ggaac 25
 <210> 26
 <211> 25
 <212> DNA
 <213> Plasmid vector
 <400> 26
 gttctggcaa acaaattcgg cgcac 25
 <210> 27
 <211> 51
 <212> DNA
 <213> Plasmid vector
 <400> 27
 tgtgctcctc tttggcttgc ttccaattaa cctcactaa agggaacgaa t 51
 <210> 28
 <211> 50
 <212> DNA
 <213> Plasmid vector
 <400> 28
 ctggttcttg tctggcttgg cccaagttcc aaaactaaga gtccattggc 50
 <210> 29
 <211> 49
 <212> DNA
 <213> Plasmid vector
 <400> 29
 ggtcctcgct ctgtgtccgt tgaagtgcgc cgaatttggt tgccagaac 49
 <210> 30
 <211> 25
 <212> DNA
 <213> Plasmid vector
 <400> 30
 gaaccttggt gtgccaagtt acttc 25
 <210> 31
 <211> 25
 <212> DNA
 <213> Plasmid vector
 <400> 31
 gaactttggc tgaacccctt gttct 25

 <210> 32
 <211> 52
 <212> DNA
 <213> Plasmid vector

<400> 32	
tgtgctcctc tttggcttgc gttgaacgac taatacgact cactataggg cg	52
<210> 33	
<211> 50	
<212> DNA	
<213> Plasmid vector	
<400> 33	
ctggttcttg tctggcttgg cccaagaagt aacttggcac accaagggtc	50
<210> 34	
<211> 48	
<212> DNA	
<213> Plasmid vector	
<400> 34	
ggtcctcgct ctgtgtccgt tgaagaacaa ggggttcagc caaagttc	48
<210> 35	
<211> 48	
<212> DNA	
<213> Plasmid vector	
<400> 35	
tttgcggtgc ctgtgtcgtc gaattaaccc tcactaaagg gaacgaat	48
<210> 36	
<211> 25	
<212> DNA	
<213> Plasmid vector	
<400> 36	
atgccggatc tcctactact gggcc	25
<210> 37	
<211> 25	
<212> DNA	
<213> Plasmid vector	
<400> 37	
tgtcatagta gacagcgatg gaacg	25
<210> 38	
<211> 53	
<212> DNA	
<213> Plasmid vector	
<400> 38	
gacaagaacc agttgacgtc aagcttcccg ggacgcgtgc tagcggcgcg ccg	53
<210> 39	
<211> 50	
<212> DNA	
<213> Plasmid vector	

<400> 39
 ctggttcttg tctggcttgg cccaaggccc agtagtagga gatccggcat 50
 <210> 40
 <211> 49
 <212> DNA
 <213> Plasmid vector
 <400> 40
 ggtcctcgct ctgtgtccgt tgaacgttcc atcgctgtct actatgaca 49
 <210> 41
 <211> 50
 <212> DNA
 <213> Plasmid vector
 <400> 41
 ctggttcttg tctggcttgg cccaaaaagc cgacagccac gctcacaagc 50
 <210> 42
 <211> 49
 <212> DNA
 <213> Plasmid vector
 <400> 42
 ggtcctcgct ctgtgtccgt tgaagcccaa tgccacagag acagaatgt 49
 <210> 43
 <211> 51
 <212> DNA
 <213> Plasmid vector
 <400> 43
 ctggttcttg tctggcttgg cccaagtgg atcctctcca aggccccatc t 51
 <210> 44
 <211> 50
 <212> DNA
 <213> Plasmid vector
 <400> 44
 ggtcctcgct ctgtgtccgt tgaactccag tgccgagtgt gtggggacag 50